CHAPTER 3

GENERAL OPERATIONS AND PROCEDURES OF THE NATIONAL WEATHER SERVICE HURRICANE CENTERS

3.1. General. This chapter describes the products, procedures, and communications headers used by the National Hurricane Center (NHC) and the Central Pacific Hurricane Center (CPHC).

3.2. Products.

- **3.2.1. Tropical Weather Outlook (TWO).** Tropical weather outlooks are prepared and issued by the NHC and CPHC during their respective hurricane seasons. The NHC writes TWOs for both the Atlantic and Eastern Pacific Basins. They are transmitted at 0530, 1130, 1730, and 2230 Eastern Local Time in the Atlantic and at 0400, 1000, 1600, and 2200 Pacific local time. In the Central Pacific, TWOs are transmitted by the CPHC at 0200, 0800, 1400, and 2000 UTC. The outlook briefly describes significant areas of disturbed weather and their potential for tropical cyclone development out to 48 hours. A tropical weather summary of Atlantic, Eastern Pacific, and Central Pacific tropical cyclone activity will be prepared and issued at the end of each month during the hurricane season.
- **3.2.2. Tropical Cyclone Discussion.** The NHC and the CPHC will, as appropriate, issue tropical cyclone discussions on Atlantic, Eastern Pacific, and Central Pacific tropical cyclones at 0300, 0900, 1500, and 2100 UTC. Discussions will be disseminated for intergovernmental use only and will contain preliminary prognostic positions and maximum wind-speed forecasts up to 72 hours; will describe objective techniques, synoptic features, and climatology used; and will provide reasons for track changes.
- 3.2.3. Tropical Cyclone Public Advisories. Tropical cyclone public advisories are issued by the NHC for all tropical cyclones in the Atlantic. In the Eastern Pacific, tropical cyclone public advisories are issued by NHC for tropical cyclones that are expected to affect land within 48 hours. In the Central Pacific, tropical cyclone public advisories are issued by CPHC for all tropical cyclones within the area of responsibility. Scheduled tropical cyclone public advisories are issued at the same time scheduled tropical cyclone forecast/advisories are issued. Watch and warning break points are listed in Table 3-1. In the Western Pacific, public advisories are issued by the NWS Forecast Office, Tiyan, Guam, for all tropical cyclones within the Territory of Guam and Micronesia, using tropical cyclone forecasts/advisories prepared by the JTWC as guidance.

[NOTE: Tropical cyclone public advisories use statute miles for distance and miles per hour for speed. Nautical miles and knots may be added at the discretion of the centers.]

Table 3-1. Defining points for hurricane/tropical storm watches/warnings

La Pesca, MX Vero Beach, FL Rio San Fernando, MX Sebastian Inlet, FL Brownsville, TX Cocoa Beach, FL Port Mansfield, TX Titusville, FL Baffin Bay, TX New Smyrna Beach, FL Corpus Christi, TX Flagler Beach, FL Port Aransas, TX St. Augustine, FL Port O'Connor, TX Fernandina Beach, FL Matagorda, TX Brunswick (Altamaha Sound), GA Sargent, TX Savannah, GA Freeport, TX Edisto Beach, SC San Louis Pass, TX Cape Romain, SC High Island, TX Murrells Inlet, SC Sabine Pass, TX Little River Inlet, SC Cameron, LA Cape Fear, NC Morgan City, LA Surf City, NC Intracoastal City, LA New River Inlet, NC Grand Isle, LA Bogue Inlet, NC Mouth of the Mississippi Cape Lookout, NC River, LA Ocracoke Inlet, NC Mouth of the Pearl River, LA Cape Hatteras, NC Oregon Inlet, NC Pascagoula, MS (The inclusion of Pamlico and Albemarle Sounds Pensacola, FL Fort Walton Beach, FL should be on a case-by-case basis.) Currituck Beach Light, NC Destin, FL Panama City, FL NC/VA State line Cape Charles Light, VA Apalachicola, FL Ochlockonee River, FL Chincoteague, VA St. Marks, FL (Suggested terminology for Chesapeake Bay: Aucilla River, FL Below Windmill Point. Steinhatchee River, FL Tidal Potomac below Patuxent River. Suwannee River, FL Including Potomac River.) Cedar Key, FL Cape Henlopen, DE Cape May, NJ Yankeetown, FL Little Egg Inlet, NJ Bayport, FL Anclote Key, FL Great Egg Inlet, NJ Tarpon Springs, FL Manasquan Inlet, NJ Longboat Key, FL (The inclusion of Delaware Bay should be on a case-by-Venice, FL case basis.) Boca Grande, FL Sandy Hook, NJ Fort Myers Beach, FL Fire Island Inlet, Long Island (LI), NY Bonita Beach, FL Moriches Inlet, LI, NY Everglades City, FL Montauk Point, LI, NY East Cape Sable Port Jefferson Harbor, LI, NY Flamingo, FL New Haven, CT Watch Hill, RI Dry Tortugas Key West, FL Point Judith, RI Seven Mile Bridge, FL Woods Hole, MA Pigeon Key, FL Chatham, MA Craig Key, FL Plymouth, MA Angelfish Key, FL Gloucester, MA Key Largo, FL Merrimack River, MA Florida City, FL Portsmouth, NH Golden Beach, FL Portland, ME Hallandale, FL Rockland, ME Deerfield Beach, FL Bar Harbor, ME

Eastport, ME

Boynton Beach, FL

Lake Worth, FL Jupiter Inlet, FL Stuart, FL Fort Pierce, FL **3.2.4. Tropical Cyclone Forecast/Advisories.** Tropical cyclone forecast/advisories are issued by the NHC and the CPHC. See Section 4.3 for content and format of the advisories. In both the Atlantic and Pacific, the advisories are scheduled for 0300, 0900, 1500, and 2100 UTC. Pacific advisories should be transmitted 15 minutes before the effective time. In the Western Pacific, tropical cyclone forecasts/advisories are issued by the JTWC. Information on the broadcast of tropical cyclone information to coastal and high-seas shipping can be found in Chapter 8, Marine Weather Broadcasts.

3.2.5. Probability of Hurricane/Tropical Storm Conditions.

3.2.5.1. When Issued. The probability of hurricane/tropical storm conditions shall be issued in tabular form at regularly scheduled tropical cyclone public advisory and tropical cyclone forecast/advisory times, and when public advisories are issued. These probabilities will generally be carried for all named storms in the Atlantic Basin¹ within 72 hours of forecasted landfall. In addition, NHC may issue probabilities for tropical depressions forecast to become named storms and be a threat to land within 72 hours. When a tropical cyclone is forecast to track parallel to a coastline, maximum values over water points should be included, and the tropical cyclone public advisory should state that the highest probabilities are over water. The 72-hour cumulative probabilities of less than 5 percent are not included in the transmitted probability tables.

3.2.5.2. When Computed. The probabilities, which are based on the official forecast track, should be issued when the 72-hour forecast position approaches the coast and should be carried in advisories until the storm makes landfall. Two conditions in which probability information should not be issued are: (1) the hurricane/tropical storm has made landfall and is not expected to reemerge over water and/or (2) the computed probability values are not significant. NHC may discontinue issuance of probabilities earlier if other factors arise, such as difficulties with evacuation orders, etc. At the discretion of the hurricane forecaster, probabilities need not be listed for sites where the tropical storm or hurricane would likely be over land or less than tropical storm strength at the time it would affect the site. NHC may include a brief explanation of probabilities in the advisory.

These probabilities should be computed shortly after synoptic times for the 0-24, 24-36, 36-48, and 48-72 hours. A total probability for the next 72 hours should be shown in the last column and should represent a total of all forecast periods. The probability of the storm striking a coastal location within 48 hours may be determined by adding the 0-24, 24-36, and 36-48 hour probabilities. If the probability for a location is less than 1 percent, an "X" will be indicated in the table. If probabilities are not to be issued, a statement will be included in both the tropical cyclone public advisory and the tropical cyclone forecast/advisory. Refer to *Probability of Hurricane/Tropical Storm Conditions: A User's Manual* for further information.

¹ Atlantic Basin includes the Atlantic, Caribbean and Gulf of Mexico

3.2.5.3. Locations. When appropriate, specific probabilities will be computed for the following locations:

Brownsville, TX Fort Pierce, FL Corpus Christi, TX Cocoa Beach, FL Port O'Connor, TX Daytona Beach, FL Jacksonville, FL Galveston, TX Port Arthur, TX Savannah, GA New Iberia, LA Charleston, SC Myrtle Beach, SC New Orleans, LA Buras, LA Wilmington, NC Morehead City, NC Gulfport, MS Mobile, AL Cape Hatteras, NC Norfolk, VA Pensacola, FL Panama City, FL Ocean City, MD Atlantic City, NJ Apalachicola, FL St. Marks, FL New York City, NY Cedar Key, FL Montauk Point, NY Tampa, FL Providence, RI Venice, FL Nantucket, MA Fort Myers, FL Hyannis, MA Marco Island, FL Boston, MA Key West, FL Portland, ME Marathon, FL Bar Harbor, ME Miami, FL Eastport, ME West Palm Beach, FL 28N 93W 29N 85W 28N 95W 29N 87W 27N 96W 28N 89W 25N 96W 28N 91W

Probabilities are not issued for the west coast of the continental United States, Hawaii, and the Territory of Guam and Micronesia.

- **3.2.6.** Tropical Cyclone Updates. Tropical cyclone updates are brief statements in lieu of or preceding special forecasts to inform of significant changes in a tropical cyclone, or to post or cancel watches and warnings.
- **3.2.7.** Atlantic and Gulf of Mexico Tropical Cyclone Position Estimates. The hurricane centers may issue a position estimate between scheduled advisories/forecasts whenever the storm center is within 200 nm of a U.S. land-based radar and sufficient and regular radar reports are

available to the center. Position estimates disseminated to the public, DOD, and other Federal agencies will provide geographical positions in two ways: by latitude and longitude and by distance and direction from a well-known point.

- **3.2.8. Special Tropical Disturbance Statement.** Special tropical disturbance statements may be issued to furnish information on strong formative, non-depression systems.
- **3.2.9. Storm Summaries.** Storm summaries are written by the Hydrometeorological Prediction Center (HPC) after subtropical and tropical cyclones have moved inland and tropical cyclone public advisories and tropical cyclone forecast/advisories have been discontinued. Storm summaries shall continue to be numbered in sequence with tropical cyclone public advisories on named storms. Also, these storm summaries will reference the former storm's name and be issued as long as the remnants of the storm pose a serious hydrometeorological threat.
- **3.2.10. Tropical Weather Discussion.** NHC issues these discussions four times a day. They describe significant features from the latest surface analysis and significant weather areas for the Gulf of Mexico, the Caribbean, and between the equator and 32°N in both the Atlantic and Eastern Pacific east of 140°W. Plain language is used.
- **3.2.11. Tropical Disturbance Rainfall Estimates.** As required, the NHC/CPHC will issue satellite-based rainfall estimates for tropical disturbances and tropical cyclones within 36 hours of forecasted landfall.
- **3.2.12. Satellite Interpretation Message.** CPHC issues these messages four times a day to describe synoptic features and significant weather areas. FAA contractions are used.

3.3. <u>Designation of Tropical and Subtropical Cyclones.</u>

- **3.3.1.** Numbering of Tropical and Subtropical Depressions. The hurricane centers are responsible for numbering tropical and subtropical depressions in their areas of responsibility. Tropical depressions shall be numbered consecutively beginning each season with the spelled out number "ONE." For ease in differentiation, tropical depression numbers shall include the suffix "E" for Eastern Pacific, "C" for Central Pacific, or "W" for Western Pacific, after the number. In both the Atlantic and Pacific, once the depression has reached tropical storm strength, it shall be named and the depression number dropped, not to be used again until the following year.
- **3.3.1.1. Atlantic, Caribbean, and Gulf of Mexico.** Depression numbers, ONE, TWO, THREE, will be assigned by the NHC after advising the Naval Atlantic Meteorology and Oceanography Center (NAVLANTMETOCCEN) Norfolk.
- **3.3.1.2. Pacific East of 140°W.** Depression numbers, with the suffix E, e.g., ONE-E, TWO-E, THREE-E, will be assigned by the NHC after advising the Naval Pacific Meteorology and Oceanography Center (NAVPACMETOCCEN), Pearl Harbor. The assigned identifier shall be retained even if the depression passes into another warning area.

- **3.3.1.3.** Pacific West of 140°W and East of 180°. Depression numbers, with suffix C; e.g., ONE-C, TWO-C, THREE-C, will be assigned by the CPHC after advising the NAVPACMETOCCEN, Pearl Harbor.
- **3.3.1.4.** Pacific West of 180° and North of 0° . Depression numbers, with suffix W; e.g., ONE-W, TWO-W, THREE-W, are assigned by JTWC.
- **3.3.1.5. Subtropical Depressions.** The numbering of subtropical cyclones shall follow the same procedure as above except a separate consecutive numbering sequence beginning with "ONE" shall be used for subtropical depressions and continues in effect if the system strengthens into a subtropical storm.

3.3.2. Naming of Tropical and Subtropical Storms and Hurricanes.

- **3.3.2.1. Atlantic and Eastern Pacific.** Once the depression has reached tropical storm strength, it shall be named and the depression number will be dropped. If a subtropical cyclone becomes a tropical storm or hurricane, it receives the next available <u>name</u> in the tropical storm naming sequence. A different set of names will be used each year. After a set is used, it will drop to the end of the list to be used again in 6 years. Names of significant hurricanes will be retired and replaced. Lists of Atlantic and Eastern Pacific names are provided in Tables 3-2 and 3-3, respectively.
- **3.3.2.2. Central Pacific.** When a tropical depression intensifies into a tropical storm or hurricane between 140°W and 180°, the depression number will be discontinued and replaced by an appropriate name. The CPHC will select the name from the list of Central Pacific names in Table 3-4. All of the names listed in each column, beginning with column 1, will be used before going on to the next column.
- **3.3.2.3. Western Pacific.** For the Pacific west of 180°, tropical storms and typhoons are named by JTWC, Guam. The names listed in Table 3-5 are for information only.

3.4. Transfer of Warning Responsibility.

- **3.4.1. NHC to CPHC.** When a tropical or subtropical cyclone approaches 140°W, the coordinated transfer of warning responsibility from NHC to CPHC will be made and the appropriate advisory issued.
- **3.4.2. CPHC to JTWC.** When a tropical or subtropical cyclone crosses 180° from east to west, the coordinated transfer of warning responsibility from CPHC to JTWC through NAVPACMETOCCEN, Pearl Harbor, will be made and the appropriate advisory issued.
- **3.4.3. JTWC to CPHC.** When a tropical or subtropical cyclone crosses 180° from west to east, the coordinated transfer of warning responsibility from JTWC to CPHC will be made through NAVPACMETOCCEN, Pearl Harbor. The JTWC will append the statement, "Next advisory by CPHC-HNL" to their last advisory.

Table 3-2. Atlantic tropical cyclone names

	<u>1998</u>		<u>1999</u>	
claw-DET ERR-ree-ka FAY-bee-in ahn-REE IS-a-bell WAN NIK-o-las o-DET te-REE-sa VIC-ter	ALEX BONNIE CHARLEY DANIELLE EARL FRANCES GEORGES HERMINE IVAN JEANNE KARL LISA MITCH NICOLE OTTO PAULA RICHARD SHARY TOMAS VIRGINIE WALTER	dan-YELL ZHORZH her-MEEN eye-van JEEN LEE-sa ni-COLE RICH-erd SHA-ree to-MAS vir-JIN-ee	ARLENE BRET CINDY DENNIS EMILY FLOYD GERT HARVEY IRENE JOSE KATRINA LENNY MARIA NATE OPHELIA PHILIPPE RITA STAN TAMMY VINCE WILMA	ho-ZAY ka-TREE-na ma-REEH-ah o-FEEL-ya fe-LEEP
	<u>2001</u>		<u>2002</u>	
al-BAIR-to BER-ril er-NES-toe he-LEEN EYE-sak MIKE-el nay-DEEN ra-fa-EL	ALLISON BARRY CHANTAL DEAN ERIN FELIX GABRIELLE HUMBERTO IRIS JERRY KAREN LORENZO MICHELLE NOEL OLGA PABLO REBEKAH SEBASTIEN TANYA VAN	shan-TAHL AIR-in FEEL-ix gay-bree-EL oom-BAIR-to EYE-ris PA-blow say-BAS-tyan TAHN-ya	ARTHUR BERTHA CESAR DOLLY EDOUARD FRAN GUSTAV HORTENSE ISIDORE JOSEPHINE KYLE LILI MARCO NANA OMAR PALOMA RENE SALLY TEDDY VICKY	BUR-tha say-ZAR eh-DWARD GOO-stahv HOR-tense IS-i-door JO-ze-feen LIL-ee NAN-uh pa-LOW-ma re-NAY
	ERR-ree-ka FAY-bee-in ahn-REE IS-a-bell WAN NIK-o-las o-DET te-REE-sa VIC-ter al-BAIR-to BER-ril er-NES-toe he-LEEN EYE-sak MIKE-el nay-DEEN	claw-DET CHARLEY DANIELLE ERR-ree-ka EARL FAY-bee-in FRANCES GEORGES ahn-REE HERMINE IS-a-bell IVAN WAN JEANNE KARL LISA MITCH NIK-o-las NICOLE o-DET OTTO PAULA RICHARD SHARY te-REE-sa TOMAS VIC-ter VIRGINIE WALTER 2001 al-BAIR-to ALLISON BER-ril BARRY CHANTAL DEAN er-NES-toe ERIN FELIX GABRIELLE he-LEEN HUMBERTO EYE-sak IRIS JERRY KAREN LORENZO MIKE-el MICHELLE nay-DEEN NOEL OLGA PABLO ra-fa-EL REBEKAH SEBASTIEN	Claw-DET	ALEX

If over 21 tropical cyclones occur in a year, the Greek alphabet will be used following the W-named cyclone.

Table 3-3. Eastern Pacific tropical cyclone names

<u>1997</u>		<u>1998</u>		1999	
BLANCA BL CARLOS DOLORES	nn DRASE _AHN kah	AGATHA BLAS CELIA DARBY		ADRIAN BEATRIZ CALVIN DORA	BEE a triz
FELICIA fa GUILLERMO ge HILDA	nh REE kay LEE sha ee YER mo	ESTELLE FRANK GEORGETTE HOWARD		EUGENE FERNANDA GREG HILARY	fer NAN dah
JIMENA he KEVIN LINDA MARTY	eg NAH cio e MAY na	ISIS JAVIER KAY LESTER MADELINE	EYE sis ha VEEAIR	IRWIN JOVA KENNETH LIDIA MAX	HO vah
PAULINE RICK	H lahf	NEWTON ORLENE PAINE ROSLYN	or LEAN	NORMA OTIS PILAR RAMON	rah MONE
SANDRA TERRY VIVIAN WALDO		SEYMOUR TINA VIRGIL WINIFRED		SELMA TODD VERONICA WILEY	
YORK	EE nah	XAVIER YOLANDA	ZAY vier yo LAHN da	XINA YORK	ZEE nah
ZELDA ZE	EL dah	ZEKE		ZELDA	ZEL dah
2000		2001		2002	
ALETTA ah BUD CARLOTTA DANIEL	n LET ah	ADOLPH BARBARA COSME DALILA	COS may	ALMA BORIS CRISTINA DOUGLAS	AL mah
FABIO FA	e MILL ya AH bee o IL mah	ERICK FLOSSIE GIL		ELIDA FAUSTO GENEVIEVE	ELL ee dah FOW sto
JOHN	ay AH nah	HENRIETTE ISRAEL JULIETTE	hen ree ETT	HERNAN ISELLE JULIO	her NAHN ee SELL HOO lee o
KRISTY LANE MIRIAM NORMAN		KIKO LORENA MANUEL NARDA	KEE ko low RAY na mahn WELL	KENNA LOWELL MARIE NORBERT	
OLIVIA PAUL ROSA		OCTAVE PRISCILLA RAYMOND	AHK tave	ODILE POLO RACHEL	oh DEAL
TARA	R gee oh ee CEN tay	SONIA TICO VELMA	SONE yah TEE koh	SIMON TRUDY VANCE	
WILLA	·	WALLIS	755	WINNIE	7427
	AY vier LAHN da	XINA YORK ZELDA	ZEE nah ZEL dah	XAVIER YOLANDA ZEKE	ZAY vier yo LAHN da

If over 24 tropical cyclones occur in a year, the Greek alphabet will be used following ZEKE or ZELDA.

Table 3-4. Central Pacific tropical cyclone names

	COLUMN 1	C	OLUMN 2	C	COLUMN 3	COLUMN	۱4
Name	Pronunciation	Name	Pronunciation	Name	Pronunciation	Name	Pronunciation
AKONI EMA HANA IO KELI LALA MOKE NELE OKA PEKE ULEKI WILA	ah-KOH-nee EH-mah HAH-nah EE-oo KEH-lee LAH-lah MOH-keh NEH-leh OH-kah PEH-keh oo-LEH-kee	AKA EKEKA HALI IOLANA KEONI LI MELE NONA OLIWA PAKA UPANA WENE	AH-kah eh-KEH-kak HAH-lee ee-OH-lah-nah keh-ON-nee LEE MEH-leh NOH-nah oh-LEE-vah PAH-kah oo-PAH-nah WEH-neh	ALIKA ELE HUKO IOKE KIKA LANA MAKA NEKI OLEKA PENI ULIA WALI	ah-LEE-kah EH-leh HOO-koh ee-OH-keh KEE-kah LAH-nah MAH-kah NEH-kee oh-LEH-kah PEH-nee oo-LEE-ah WAH-lee	ANA ELA HALOLA IUNE KIMO LOKE MALIA NIALA OKO PALI ULIKA WALAKA	AH-nah EH-lah hah-LOH-lah ee-OO-neh KEE-moh LOH-keh mah-LEE-ah nee-AH-lah OH-koh PAH-lee oo-LEE-kah wah-LAH-kah
V V I I I / (VEE IGII	* * - : *-	***	V V / \L	******	***	wan E ar kan

NOTE: Use Column 1 list of names until exhausted before going to Column 2, etc. All letters in the Hawaiian language are pronounced, including double or triple vowels.

Table 3-5. Western Pacific tropical cyclone names

COLUMN ²	<u>l</u>	COLUMN 2	<u>2</u>	COLUMN 3	<u>3</u>	COLUMN 4	<u>1</u>
	Pronunciation		Pronunciation		Pronunciation		Pronunciation
ANN	AN	ABEL	A-bel	AMBER	AM-ber	ALEX	AL-x
BART	BART	BETH	BETH	BING	BING	BABS	BABS
CAM	KAM	CARLO	KAR-lo	CASS	KASS	CHIP	CHIP
DAN	DAN	DALE	DAY-I	DAVID	DAY-vid	DAWN	DAWN
EVE	EEV	ERNIE	ER-nee	ELLA	EL-lah	ELVIS	EL-vis
FRANKIE	FRANK-ee	FERN	FERN	FRITZ	FRITZ	FAITH	FAITH
GLORIA	GLOR-ee-uh	GREG	GREG	GINGER	JIN-jer	GIL	GIL
HERB	HERB	HANNAH	HAN-ah	HANK	HANK	HILDA	HIL-dah
IAN	EE-an	ISA	EE-sah	IVAN	I-van	IRIS	I-ris
JOY	JOY	JIMMY	JIM-ee	JOAN	JOAN	JACOB	JAY-kob
KIRK	KIRK	KELLY	KEL-ee	KEITH	KEETH	KATE	KATE
LISA	LEE-sah	LEVI	LEE-vi	LINDA	LIN-dah	LEO	LEE-o
MARTY	MAR-tee	MARIE	ma-REE	MORT	MORT	MAGGIE	MAG-ee
NIKI	NI-kee	NESTOR	NES-tor	NICHOLE	nik-KOL	NEIL	NEEL
ORSON	OR-son	OPAL	O-pel	OTTO	OT-tow	OLGA	OL-gah
PIPER	PI-per	PETER	PEE-ter	PENNY	PEN-ee	PAUL	PAUL
RICK	RICK	ROSIE	RO-zee	REX	REX	RACHEL	RAY-chel
SALLY	SAL-lee	SCOTT	SCOTT	STELLA	STEL-lah	SAM	SAM
TOM	TOM	TINA	TEE-nah	TODD	TODD	TANYA	TAHN-yah
VIOLET	VI-uh-let	VICTOR	vik-TOR	VICKI	VIK-ee	VIRGIL	VER-jil
WILLIE	WIL-lee	WINNIE	WIN-ee	WALDO	WAL-doh	WENDY	WEN-dee
YATES	YATES	YULE	YOU-lee	YANNI	YAN-nee	YORK	YORK
ZANE	ZANE	ZITA	ZEE-tah	ZEB	ZEB	ZIA	ZEE-uh

NOTE: Names will be assigned in rotation, alphabetically, starting with ANN for the first tropical cyclone of 1996. When the last name in Column 4 (ZIA) has been used, the sequence will begin again with the first name in Column 1 (ANN).

3.5. Alternate Warning Responsibilities.

3.5.1. Transfer to Alternate. In the event of impending or actual operational failure of a hurricane forecast center, tropical warning responsibilities will be transferred to an alternate facility in accordance with existing directives and retained there until resumption of responsibility can be made. Alternate facilities are as follows:

PRIMARY

ALTERNATE

NHC

National Centers for Environmental Prediction
Hydrometeorological Prediction Center (HPC)
Camp Springs, MD

CPHC

NHC

CARCAH

53rd Weather Reconnaissance Squadron (53 WRS)

JTWC

NAVPACMETOCCEN

- **3.5.2. Notification**. The NAVLANTMETOCCEN, Norfolk, and NAVPACMETOCCEN, Pearl Harbor, will be advised by NHC, CARCAH, and CPHC, as appropriate, of impending or actual transfer of responsibility by the most rapid means available. The NAVPACMETOCCEN, Pearl Harbor, will advise CPHC and NHC of impending or actual transfer of JTWC responsibilities. In the event of an operational failure of CARCAH, direct communication is authorized between 53 WRS and the forecast facility. Contact 53 WRS at DSN 597-2409/COM 601-377-2409 or through the Keesler AFB Command Post at DSN 597-4330/COM 601-377-4330 (ask for the 53 WRS).
- **3.6.** Abbreviated Communications Headings. Abbreviated communications headings are assigned to advisories on tropical and subtropical cyclones and other advisories based on depression numbers or storm name and standard communication procedures.

[NOTE: An abbreviated heading consists of three groups with ONE space between each of the groups. The first group contains a data type indicator (e.g., WT for hurricane), a geographical indicator (e.g. NT for Atlantic Basin), and a number. The second group contains a location identifier of the message originator (e.g., KNHC for TPC/NHC). The third group is a date-time group in UTC. An example of a complete header is: WTNT31 KNHC 180400.]

Abbreviated communication headers for the areas of responsibility follow:

3.6.1. Atlantic.

ABNT20 KNHC Tropical Weather Outlook

ABNT30 KNHC Tropical Weather Summary (monthly)

WTNT41-45 KNHC Tropical Cyclone Discussion

WTNT31-35 KNHC Tropical Cyclone Public Advisory

WTNT21-25 KNHC Tropical Cyclone Forecast/Advisory

WTNT71-75 KNHC Tropical Cyclone Strike Probabilities

WTNT61 KNHC Tropical Cyclone Update

WTNT51 KNHC Tropical Cyclone Position Estimate

WONT41 KNHC Special Tropical Disturbance Statement

3.6.2. Pacific.

3.6.2.1. Advisories. All advisories on hurricanes, tropical storms, and depressions are under WT abbreviated headings, as follows:

ABPZ30 KNHC Tropical Weather Outlook

ABPA30 PHNL Tropical Weather Summary (monthly)

TYPS10 PHNL Southern Hemisphere Tropical Cyclone Summary

WTPZ21-25 KNHC Tropical Cyclone Forecast/Advisory

WTPA21-25 PHNL Tropical Cyclone Forecast/Advisory

WTPZ31-35 KNHC Tropical Cyclone Public Advisory

WTPA31-35 PHNL Tropical Cyclone Public Advisory

WTPQ31-35 PGUM Tropical Cyclone Public Advisory

3.6.2.2. Numbering. Depressions are numbered internally and storms are named internally, but the number in the abbreviated headings does not relate to either the internal number of the depression or the name of the storm. The first cyclone would have 21 and 31 in the abbreviated headings, the second cyclone would have 22 and 32, the sixth cyclone would have 21 and 31, etc. The abbreviated heading would not change when a depression was upgraded to storm status.

ABPA20 PHNL Tropical Weather Summary (monthly)

ABPZ20 KNHC Tropical Weather Outlook

WTPZ41-45 KNHC Tropical Cyclone Discussion

WTPA41-45 PHNL Tropical Cyclone Discussion

WTPZ51 KNHC Tropical Cyclone Position Estimate

WTPA51 PHNL Tropical Cyclone Position Estimate

WTPZ61 KNHC Tropical Cyclone Update

WTPA61 PHNL Tropical Cyclone Update

WOPZ41 KNHC Special Tropical Disturbance Statement

WOPA41 PHNL Special Tropical Disturbance Statement

FXUS01 KWBC 1 - 2 Day Discussion

FXUS02 KWBC 3 - 5 Day Forecast

FXUS04 KWBC Precipitation Discussion